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NOTICE OF ALLOWANCE AND FEE(S) DUE

22852

7590

06/09/2008

FINNEGAN, HENDERSON, FARABOW, GARRETT & DUNNER
LLP
901 NEW YORK AVENUE, NW
WASHINGTON, DC 20001-4413

EXAMINER

RAHMANT, NILOOFAR

ART UNIT

PAPER NUMBER

1625

DATE MAILED: 06/09/2008

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/518,496	09/19/2005	Maria Prat Quinones	09605.0044	4930

TITLE OF INVENTION: QUINUCLIDINE DERIVATIVES AND PHARMACEUTICAL COMPOSITIONS CONTAINING THE SAME

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	NO	\$1440	\$300	\$0	\$1740	09/09/2008

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. **PROSECUTION ON THE MERITS IS CLOSED.** THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN **THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE** OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. **THIS STATUTORY PERIOD CANNOT BE EXTENDED.** SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE DOES NOT REFLECT A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE IN THIS APPLICATION. IF AN ISSUE FEE HAS PREVIOUSLY BEEN PAID IN THIS APPLICATION (AS SHOWN ABOVE), THE RETURN OF PART B OF THIS FORM WILL BE CONSIDERED A REQUEST TO REAPPLY THE PREVIOUSLY PAID ISSUE FEE TOWARD THE ISSUE FEE NOW DUE.

HOW TO REPLY TO THIS NOTICE:

I. Review the SMALL ENTITY status shown above.

If the SMALL ENTITY is shown as YES, verify your current SMALL ENTITY status:

A. If the status is the same, pay the TOTAL FEE(S) DUE shown above.

B. If the status above is to be removed, check box 5b on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and twice the amount of the ISSUE FEE shown above, or

If the SMALL ENTITY is shown as NO:

A. Pay TOTAL FEE(S) DUE shown above, or

B. If applicant claimed SMALL ENTITY status before, or is now claiming SMALL ENTITY status, check box 5a on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and 1/2 the ISSUE FEE shown above.

II. PART B - FEE(S) TRANSMITTAL, or its equivalent, must be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed and an extra copy of the form should be submitted. If an equivalent of Part B is filed, a request to reapply a previously paid issue fee must be clearly made, and delays in processing may occur due to the difficulty in recognizing the paper as an equivalent of Part B.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

IMPORTANT REMINDER: Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.

PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), to: **Mail** **Mail Stop ISSUE FEE**
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INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

22852 7590 06/09/2008

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Certificate of Mailing or Transmission

I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being facsimile transmitted to the USPTO (571) 273-2885, on the date indicated below.

(Depositor's name)
(Signature)
(Date)

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10/518,496	09/19/2005	Maria Prat Quinones	09605.0044	4930

TITLE OF INVENTION: QUINUCLIDINE DERIVATIVES AND PHARMACEUTICAL COMPOSITIONS CONTAINING THE SAME

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	NO	\$1440	\$300	\$0	\$1740	09/09/2008

EXAMINER	ART UNIT	CLASS-SUBCLASS
RAHMANI, NILOOFAR	1625	514-299000

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).

- ☐ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.
☐ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. Use of a **Customer Number is required.**

2. For printing on the patent front page, list

- (1) the names of up to 3 registered patent attorneys or agents OR, alternatively, 1 _____
(2) the name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed. 2 _____
3 _____

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document has been filed for recordation as set forth in 37 CFR 3.11. Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE

(B) RESIDENCE: (CITY and STATE OR COUNTRY)

Please check the appropriate assignee category or categories (will not be printed on the patent): ☐ Individual ☐ Corporation or other private group entity ☐ Government

4a. The following fee(s) are submitted:

- ☐ Issue Fee
☐ Publication Fee (No small entity discount permitted)
☐ Advance Order - # of Copies _____

4b. Payment of Fee(s): (Please first reapply any previously paid issue fee shown above)

- ☐ A check is enclosed.
☐ Payment by credit card. Form PTO-2038 is attached.
☐ The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment, to Deposit Account Number _____ (enclose an extra copy of this form).

5. **Change in Entity Status** (from status indicated above)

- ☐ a. Applicant claims SMALL ENTITY status. See 37 CFR 1.27. ☐ b. Applicant is no longer claiming SMALL ENTITY status. See 37 CFR 1.27(g)(2).

NOTE: The Issue Fee and Publication Fee (if required) will not be accepted from anyone other than the applicant; a registered attorney or agent; or the assignee or other party in interest as shown by the records of the United States Patent and Trademark Office.

Authorized Signature _____

Date _____

Typed or printed name _____

Registration No. _____

This collection of information is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450.

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Determination of Patent Term Adjustment under 35 U.S.C. 154 (b) (application filed on or after May 29, 2000)

The Patent Term Adjustment to date is 296 day(s). If the issue fee is paid on the date that is three months after the mailing date of this notice and the patent issues on the Tuesday before the date that is 28 weeks (six and a half months) after the mailing date of this notice, the Patent Term Adjustment will be 296 day(s).

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (<http://pair.uspto.gov>).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 or (571)-272-4200.

Notice of Allowability

Application No.

10/518,496

Examiner

NILOOFAR RAHMANI

Applicant(s)

PRAT QUINONES ET AL.

Art Unit

1625

- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to Remark dated on 03/07/2008.
2. ☒ The allowed claim(s) is/are 36,37,39,41,42,44-64 and 80.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some* c) ☐ None of the:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).
- * Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date 06/02/2008
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413),
Paper No./Mail Date _____.
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.

/D. Margaret Seaman/
Primary Examiner, Art Unit 1625

EXAMINER'S AMENDMENT

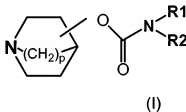
An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Carlos M. Tellez on June 04, 2008.

REPLACE, current claims dated on 03/07/2008 with the claims

"1-35. (Canceled).

36. (Currently Amended) A compound of formula (I)



wherein

- R1 represents a group chosen from phenyl, 2-furyl, 3-furyl, 2-thienyl, 3-thienyl, benzyl, furan-2-ylmethyl, furan-3-ylmethyl, thiophen-2-ylmethyl, and thiophen-3-ylmethyl;

- R2 represents a group chosen from optionally substituted lower alkyl, optionally substituted lower alkenyl, optionally substituted lower alkynyl, saturated or unsaturated cycloalkyl, saturated or unsaturated cycloalkylmethyl, phenyl, benzyl, phenethyl, furan-2-ylmethyl, furan-3-ylmethyl, thiophen-2-ylmethyl,

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thiophen-3-ylmethyl, pyridyl, and pyridylmethyl; wherein the carbocyclic moieties in the cycloalkyl, cycloalkylmethyl, phenyl, benzyl or phenethyl groups are optionally bridged or fused to another saturated, unsaturated or aromatic carbocyclic moiety or to a cyclic moiety comprising carbon atoms and 1 or 2 oxygen atoms;

wherein the cyclic groups present in R1 and R2 are optionally substituted by one, two or three, which may be identical or different, substituents chosen from halogen; straight or branched, optionally substituted lower alkyl; hydroxy; straight or branched, optionally substituted lower alkoxy; -SH; straight or branched optionally substituted lower alkylthio; nitro; cyano; -NR'R"; -CO₂R'; -C(O)-NR'R"; -N(R''')C(O)-R'; and -N(R''')-C(O)NR'R"; wherein R', R" and R''', which may be identical or different, are each independently chosen from a hydrogen atom, and a straight or branched, optionally substituted lower alkyl group, or R' and R" together with the atom to which they are attached form a cyclic group; and

- p is 1 or 2 and the carbamate group is attached at positions 2, 3 or 4 of the azabicyclic ring;

wherein when the cyclic group present in R1 is unsubstituted or has only one substituent, R2 has at least one substituent;

wherein when

- p is 2;
- the carbamate group is attached at position 3 of the azabicyclic ring; and

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- R1 is a phenyl group, which is optionally substituted with one or two, identical or different, substituents chosen from chlorine, fluorine, bromine, methyl, hydroxy and cyano;

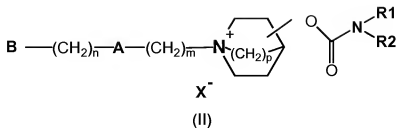
then R2 cannot be one of: unsubstituted cyclopropylmethyl; unsubstituted cyclobutylmethyl; unsubstituted cyclopentylmethyl; cyclohexylmethyl optionally substituted with a methyl or an isopropenyl group; unsubstituted cyclohexenyl; unsubstituted norbornenyl; unsubstituted bicyclo[2,2,1]heptanyl; unsubstituted benzo[1,3]dioxolyl; unsubstituted 2,3-dihydrobenzo[1,4]dioxinyl; unsubstituted benzyl; a benzyl group which is substituted with one or two, identical or different, substituents chosen from fluorine, chlorine, bromine, methoxy, methyl, trifluoromethyl, ethyl, tertbutyl, hydroxy, hydroxymethyl, cyano, aminocarbonyl, trifluoromethoxy, benzyloxy, and isopropoxy; or a benzyl group which is substituted with three fluorine atoms;

or a pharmaceutically acceptable salt thereof or a stereoisomer thereof with the proviso that the compound of formula (I) is not one of

- Diphenylcarbamic acid 1-azabicyclo[2.2.2]oct-3-yl ester,
- Ethylphenylcarbamic acid 1-azabicyclo[2.2.2]oct-3-yl ester,
- Quinuclidin-3-yl benzo[d][1,3]dioxol-5-ylmethyl(phenyl)carbamate, or
- Quinuclidin-3-yl (2,3-dihydrobenzo[b][1,4]dioxin-6-yl)methyl(m-tolyl)carbamate.

37. (Currently Amended) A compound of formula (II)

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wherein

- R1 represents a group chosen from phenyl, 2-furyl, 3-furyl, 2-thienyl, 3-thienyl, benzyl, furan-2-ylmethyl, furan-3-ylmethyl, thiophen-2-ylmethyl, and thiophen-3-ylmethyl;

- R2 represents a group chosen from optionally substituted lower alkyl, optionally substituted lower alkenyl, optionally substituted lower alkynyl, saturated or unsaturated cycloalkyl, saturated or unsaturated cycloalkylmethyl, phenyl, benzyl, phenethyl, furan-2-ylmethyl, furan-3-ylmethyl, thiophen-2-ylmethyl, thiophen-3-ylmethyl, pyridyl, and pyridylmethyl; wherein the carbocyclic moieties in the cycloalkyl, cycloalkylmethyl, phenyl, benzyl or phenethyl groups are optionally bridged or fused to another saturated, unsaturated or aromatic carbocyclic moiety or to a cyclic moiety comprising carbon atoms and 1 or 2 oxygen atoms;

wherein the cyclic groups present in R1 and R2 are optionally substituted by one, two or three, which may be identical or different, substituents chosen from halogen; straight or branched, optionally substituted lower alkyl; hydroxy; straight or branched, optionally substituted lower alkoxy; -SH; straight or branched optionally substituted lower alkylthio; nitro; cyano; -NR'R", -CO₂R', -C(O)-NR'R",

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-N(R'')C(O)-R', and -N(R''')-C(O)NR'R'' groups, wherein R', R'' and R''', which may be identical or different, are each independently chosen from a hydrogen atom and a straight or branched, optionally substituted lower alkyl group, or R' and R'' together with the atom to which they are attached form a cyclic group;

- p is 1 or 2 and the carbamate group is attached at positions 2, 3 or 4 of the azabicyclic ring;

- m is an integer ranging from 0 to 8;

- n is an integer ranging from 0 to 4;

- A represents a group chosen from -CH₂-, -CH=CR'-; -CR'=CH-; -CR'R''-; -C(O)-, -O-, -S-, -S(O)-, -S(O)₂- and -NR'-, wherein R' and R'', which may be identical or different, are each independently chosen from a hydrogen atom and a straight or branched, optionally substituted lower alkyl group, or R' and R'' together with the atom to which they are attached form a cyclic group;

- B represents a hydrogen atom, or a group chosen from straight or branched, optionally substituted lower alkyl; hydroxy; straight or branched, optionally substituted lower alkoxy; cyano; nitro; -CH=CR'R''; -C(O)OR'; -OC(O)R'; -SC(O)R'; -C(O)NR'R''; -NR'C(O)OR''; -NR'C(O)NR''; cycloalkyl; phenyl; naphthanelyl; 5,6,7,8-tetrahydronaphthanelyl; benzo[1,3]dioxolyl; heteroaryl; and heterocyclyl; wherein R' and R'', which may be identical or different, are each independently chosen from a hydrogen atom and a straight or branched, optionally substituted lower alkyl group, or R' and R'' together with the atom to which they are attached form a cyclic group; and

wherein the cyclic groups represented by B are optionally substituted by one, two or three, identical or different, substituents chosen from halogen; hydroxy; straight or branched, optionally substituted lower alkyl; phenyl; -OR'; -SR'; -NR'R"; -NHCOR'; -CONR'R"; -CN; -NO₂; and -COOR'; wherein R' and R" are each independently chosen from a hydrogen atom, or a straight or branched, optionally substituted lower alkyl group, or R' and R" together with the atom to which they are attached form a cyclic group; and

- X⁻ represents a pharmaceutically acceptable anion of a mono or polyvalent acid;

wherein when the cyclic group present in R1 is unsubstituted or has only one substituent, R2 has at least one substituent;

wherein when

- p is 2;

- the carbamate group is attached at position 3 of the azoniabicyclic ring having (3R)-configuration;

- R1 is a phenyl group which is optionally substituted with a fluorine atom or a methyl group;

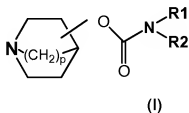
- R2 is an unsubstituted cyclohexylmethyl group or a benzyl group which is optionally substituted with one or three fluorine atoms; and

- X⁻ is iodine;

then, the sequence B-(CH₂)_n-A-(CH₂)_m- cannot be a methyl group;

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or a stereoisomer thereof; or a mixture of stereoisomers thereof, or a mixture of at least one stereoisomer of a compound of formula (II) and at least one stereoisomer of a compound of formula (I)



38. (Canceled).

39. (Previously Presented) The compound of Claim 36 wherein when R2 is not substituted, the cyclic group present in R1 has at least two substituents.

40. (Canceled).

41. (Currently Amended) The compound of Claim 36, wherein R1 represents a group chosen from 2-furyl, 3-furyl, 2-thienyl, 3-thienyl, benzyl, furan-2-ylmethyl, furan-3-ylmethyl, thiophen-2-ylmethyl; and thiophen-3-ylmethyl; wherein the cyclic group present in R1 is optionally substituted by one, two, or three, identical or different, substituents chosen from halogen; straight or branched, optionally substituted lower alkyl; hydroxy; straight or branched, optionally substituted lower alkoxy; -SH; straight or branched optionally substituted lower alkylthio; nitro; cyano; -NR'R"; -CO₂R"; -C(O)-NR'R"; -N(R'')C(O)-R'; and -N(R'')-C(O)NR'R";

wherein R', R" and R''' each independently represents a hydrogen atom or a straight or branched, optionally substituted lower alkyl group or R' and R" together with the atom to which they are attached form a cyclic group.

42. (Previously Presented) The compound of Claim 36, wherein R2 represents an optionally substituted group chosen from lower alkyl, lower alkenyl, lower alkynyl, saturated or unsaturated cycloalkyl, phenyl, phenethyl, furan-2-ylmethyl, furan-3-ylmethyl, thiophen-2-ylmethyl, thiophen-3-ylmethyl, pyridyl, pyridylmethyl, and a saturated or unsaturated cycloalkylmethyl which has at least one substituent and is chosen from substituted cyclopropylmethyl, substituted cyclobutylmethyl and substituted cyclopentylmethyl;

wherein the substituents of the cyclic group present in R2 are one, two or three, identical or different, substituents chosen from halogen; straight or branched, optionally substituted lower alkyl; hydroxy; straight or branched, optionally substituted lower alkoxy; -SH; straight or branched optionally substituted lower alkylthio; nitro; cyano; -NR'R"; -CO₂R'; -C(O)-NR'R"; -N(R''')C(O)-R'; and -N(R''')C(O)NR'R";

wherein R', R" and R''' each independently represents a hydrogen atom or a straight or branched, optionally substituted lower alkyl group or R' and R" together with the atom to which they are attached form a cyclic group.

43. (Canceled)

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44. (Previously Presented) The compound of Claim 37, wherein the compound is not one of:

- (3R)-3-(Benzylphenylcarbamoyloxy)-1-methyl-1-azoniabicyclo[2.2.2]octane iodide;
- (3R)-3-[(4-Fluorobenzyl)phenylcarbamoyloxy]-1-methyl-1-azoniabicyclo[2.2.2]octane iodide;
- (3R)-3-(Benzyl-o-tolylcarbamoyloxy)-1-methyl-1-azoniabicyclo[2.2.2]octane iodide
- (3R)-1-Methyl-3-[o-tolyl-(2,4,5-trifluorobenzyl)carbamoyloxy]-1-azoniabicyclo[2.2.2]octane iodide;
- (3R)-3-[(4-Fluorobenzyl)-m-tolylcarbamoyloxy]-1-methyl-1-azoniabicyclo[2.2.2]octane iodide;
- (3R)-3-[Benzyl-(2-fluorophenyl)carbamoyloxy]-1-methyl-1-azoniabicyclo[2.2.2]octane iodide; or
- (3R)-3-[Cyclohexylmethyl-(2-fluorophenyl)carbamoyloxy]-1-methyl-1-azoniabicyclo[2.2.2]octane iodide.

45. (Previously Presented) The compound of Claim 37, wherein R1 represents a group chosen from phenyl, 2-thienyl, 3-thienyl, thiophen-2-ylmethyl, thiophen-3-ylmethyl, furan-2-ylmethyl, and furan-3-ylmethyl, wherein the cyclic group present in R1 is optionally substituted with one, two, or three, identical or different, substituents chosen from fluorine, chlorine, bromine, methyl, methoxy, trifluoromethyl, ethyl, tert-butyl, hydroxy, and cyano.

46. (Previously Presented) The compound of Claim 45, wherein R1 represents a group chosen from phenyl, 2-fluorophenyl, 3-fluorophenyl, 4-fluorophenyl, 3-methylphenyl, 4-methylphenyl, 2,5-difluorophenyl, 2,6-difluorophenyl, 2,4,5-trifluorophenyl, 5-methylfuran-2-ylmethyl, 4-fluoro-2-methylphenyl, 3-fluoro-4-methoxyphenyl, 3-methyl-thiophen-2-ylmethyl, 4,5-dimethyl-thiophen-2-ylmethyl, thiophen-3-ylmethyl, 5-methyl-furan-2-ylmethyl, 5-methyl-2-trifluoromethyl-furan-3-ylmethyl, and 2, 5-dimethyl-furan-3-ylmethyl.

47. (Previously Presented) The compound of Claim 37, wherein R2 represents a group chosen from pent-4-enyl, pentyl, butyl, allyl, benzyl, thiophen-2-ylmethyl, thiophen-3-ylmethyl, furan-2-ylmethyl, furan-3-ylmethyl, phenethyl, cyclopentyl, cyclohexyl, and cyclohexylmethyl, wherein the cyclic group present in R2 is optionally substituted with one, two, or three, identical or different, substituents chosen from fluorine, chlorine, bromine, methyl, methoxy, trifluoromethyl, ethyl, tert-butyl, hydroxy, and cyano.

48. (Previously Presented) The compound of Claim 47, wherein R2 represents a group chosen from 3-fluorobenzyl, 2,4,5-trifluorobenzyl, 3,4,5-trifluorobenzyl, 5-bromothiophen-2-ylmethyl, 3,4-dimethoxyphenylethyl, 3-methylthiophen-2-ylmethyl, thiophen-3-ylmethyl, 4-bromo-5-methylthiophen-2-ylmethyl, 4,5-dimethylfuran-2-ylmethyl, furan-3-ylmethyl, 2-fluoro-4-methoxybenzyl, 2-(4-fluorophenyl)ethyl, butyl, pent-4-enyl, and cyclopentyl.

49. (Previously Presented) The compound of Claim 37, wherein

- A is $\text{—CH}_2\text{—}$;

- m and n are both 0;

- B represents a group chosen from straight or branched, optionally substituted lower alkyl; hydroxy; straight or branched, optionally substituted lower alkoxy; cyano; nitro; —CH=CR'R'' ; —C(O)OR' ; —OC(O)R ; —SC(O)R' ; —C(O)NR'R'' ; —NR'C(O)OR' ; —NR'C(O)NR'' ; cycloalkyl; phenyl; naphthanelyl; 5,6,7,8-

tetrahydronaphthanelyl; benzo[1,3]dioxolyl; heteroaryl; and heterocyclyl; and

- R' and R'' are each independently chosen from a hydrogen atom and a straight or branched, optionally substituted lower alkyl group, or R' and R'' together with the atom to which they are attached form a cyclic group;

and wherein the cyclic groups represented by B are optionally substituted by one, two or three, identical or different, substituents chosen from halogen; hydroxyl; straight or branched, optionally substituted lower alkyl; phenyl; —OR' ; —SR' ; —NR'R'' ; —NHCOR' ; —CONR'R'' ; —CN , —NO_2 and —COOR' ; wherein R' and R'' are each independently chosen from a hydrogen atom, or a straight or branched, optionally substituted lower alkyl group, or R' and R'' together with the atom to which they are attached form a cyclic group.

50. (Previously Presented) The compound of Claim 37, wherein

- A is $\text{—CH}_2\text{—}$;

- B represents a hydrogen atom, or a group chosen from straight or branched, optionally substituted lower alkyl; hydroxy; straight or branched, optionally substituted lower alkoxy; cyano; nitro; —CH=CR'R'' ; —C(O)OR' ; -

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OC(O)R'; -SC(O)R'; -C(O)NR'R"; -NR'C(O)OR"; -NR'C(O)NR";

cycloalkyl; phenyl; naphthanelyl; 5,6,7,8-tetrahydronaphthanelyl;

benzo[1,3]dioxolyl; heteroaryl; and heterocyclyl;

wherein R' and R" are each independently chosen from a hydrogen atom and a straight or branched, optionally substituted lower alkyl group, or R' and R"

together with the atom to which they are attached form a cyclic group;

and wherein the cyclic group represented by B is optionally substituted by one, two or three, identical or different, substituents chosen from halogen; hydroxy;

straight or branched, optionally substituted lower alkyl; phenyl; -OR'; -SR'; -

NR'R"; -NHCOR'; -CONR'R"; -CN; -NO₂; and -COOR'; wherein R' and R" are

each independently chosen from a hydrogen atom, or a straight or branched, optionally substituted lower alkyl group, or R' and R" together with the atom to which they are attached form a cyclic group; and

- at least one of m or n is not 0.

51. (Previously Presented) The compound of Claim 37, wherein B represents a thiophen-2-yl group or a phenyl group which is optionally substituted with one, two, or three, identical or different, substituents chosen from halogen atoms and hydroxy, methyl, -CH₂OH, -OMe, -NMe₂, -NHCOMe, -CONH₂, -CN, -NO₂, -COOMe, and -CF₃ groups.

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52. (Previously Presented) The compound of Claim 51, wherein B represents a group chosen from phenyl, 4-fluorophenyl, 3-hydroxyphenyl, and thiophen-2-yl.
53. (Previously Presented) The compound of Claim 37, wherein $n = 0$ or 1 ; m is an integer ranging from 1 to 6 ; and A represents a group chosen from $-\text{CH}_2-$, $-\text{CH}=\text{CH}-$, $-\text{CO}-$, $-\text{NMe}-$, $-\text{O}-$, and $-\text{S}-$.
54. (Previously Presented) The compound of Claim 53, wherein m is an integer equal to 1 , 2 or 3 and A represents a group chosen from $-\text{CH}_2-$, $-\text{CH}=\text{CH}-$, and $-\text{O}-$.
55. (Previously Presented) The compound of Claim 37, wherein $\text{B}-(\text{CH}_2)_n-\text{A}-(\text{CH}_2)_m-$ represents a group chosen from 3-phenoxypropyl, 2-phenoxyethyl, 3-phenylallyl, phenethyl, 3-phenylpropyl, 3-(3-hydroxyphenoxy)propyl, 3-(4-fluorophenoxy)propyl, 3-thiophen-2-ylpropyl, allyl, heptyl, 3-cyanopropyl, and methyl.
56. (Previously Presented) The compound of Claim 37, wherein X^- represents anion chosen from chloride, bromide, trifluoroacetate, and methanesulphonate.
57. (Previously Presented) The compound of Claim 36, wherein p is 2 .
58. (Previously Presented) The compound of Claim 36, wherein the azabicyclic ring is substituted in the 3-position.

59. (Previously Presented) The compound of Claim 58, wherein the carbon at the 3-position of the azabicyclic ring has R configuration.

60. (Previously Presented) The compound of Claim 58, wherein the carbon at the 3-position of the azabicyclic ring has S configuration.

61. (Previously Presented) The compound of Claim 36, wherein the compound of formula (I) is a single isomer.

62. (Previously Presented) The compound of Claim 36, chosen from:

- [2-(3,4-Dimethoxyphenyl)ethyl]-(5-methylfuran-2-ylmethyl)carbamic acid (3R)-1-azabicyclo[2.2.2]oct-3-yl ester;

- (5-Bromothiophen-2-ylmethyl)-(2,4,5-trifluorophenyl)carbamic acid (3R)-1-azabicyclo[2.2.2]oct-3-yl ester;

- (4-Fluoro-2-methylphenyl)-(3-methylthiophen-2-ylmethyl)carbamic acid (3R)-1-azabicyclo[2.2.2]oct-3-yl ester;

- (3-Fluoro-4-methoxyphenyl)thiophen-3-ylmethylcarbamic acid (3R)-1-azabicyclo[2.2.2]oct-3-yl ester

- Thiophen-3-ylmethyl-(2,4,5-trifluorobenzyl)carbamic acid (3R)-1-azabicyclo[2.2.2]oct-3-yl ester;

- (4-Bromo-5-methylthiophen-2-ylmethyl)-(3-methylthiophen-2-ylmethyl)carbamic acid (3R)-1-azabicyclo[2.2.2]oct-3-yl ester;

- (4, 5-Dimethylfuran-2-ylmethyl)-(5-methylfuran-2-ylmethyl)carbamic acid (3R)-1-azabicyclo[2.2.2]oct-3-yl ester;

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- Furan-3-ylmethyl-(5-methyl-2-trifluoromethylfuran-3-ylmethyl)carbamic acid (3R)-1-azabicyclo[2.2.2]oct-3-yl ester;
- (2,5-Dimethylfuran-3-ylmethyl)-(2-fluoro-4-methoxybenzyl)carbamic acid (3R)-1-azabicyclo[2.2.2]oct-3-yl ester;
- [2-(4-Fluorophenyl)ethyl]-(3-methylthiophen-2-ylmethyl)carbamic acid (3R)-1-azabicyclo[2.2.2]oct-3-yl ester;
- Butyl-(2, 5-difluorophenyl)carbamic acid (3R)-1-azabicyclo[2.2.2]oct-3-yl ester;
- (2,6-Difluorophenyl)pent-4-enylcarbamic acid (3R)-1-aza-bicyclo[2.2.2]oct-3-yl ester;
- Cyclopentyl-(4,5-dimethylthiophen-2-ylmethyl)carbamic acid (3R)-1-azabicyclo[2.2.2]oct-3-yl ester; and
- (5-Ethylthiophen-2-ylmethyl)-(3-methylthiophen-2-ylmethyl)carbamic acid (3R)-1-azabicyclo[2.2.2]oct-3-yl ester.

63. (Currently Amended) The compound of Claim ~~36~~37, chosen from:

- (3R)-3-[(3-Fluorobenzyl)-(3-fluorophenyl)carbamoxy]-1-(2-phenoxyethyl)-1-azoniabicyclo[2.2.2]octane bromide;
- (3R)-3-[(3-Fluorobenzyl)-(3-fluorophenyl)carbamoxy]-1-(3-phenylpropyl)-1-azoniabicyclo[2.2.2]octane bromide;
- (3R)-1-(2-Phenoxyethyl)-3-[m-tolyl-(2,4,5-trifluorobenzyl)carbamoxy]-1-azoniabicyclo[2.2.2]octane bromide;
- (3R)-1-(3-Phenylpropyl)-3-[m-tolyl-(2,4,5-trifluorobenzyl)carbamoxy]-1-azoniabicyclo[2.2.2]octane bromide;

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- (3R)-3-[(3-Fluorophenyl)-(3,4,5-trifluorobenzyl)carbamoyloxy]-1-(2-phenoxyethyl)-1-azoniabicyclo[2.2.2]octane bromide;
- (3R)-1-Allyl-3-[[2-(3,4-dimethoxyphenyl)ethyl]-(5-methylfuran-2-ylmethyl)carbamoyloxy]-1-azoniabicyclo[2.2.2]octane bromide;
- (3R)-3-[(5-Bromothiophen-2-ylmethyl)-(2,4,5-trifluorophenyl)carbamoyloxy]-1-(3-phenoxypropyl)-1-azoniabicyclo[2.2.2]octane trifluoroacetate;
- (3R)-3-[[2-(3,4-dimethoxyphenyl)ethyl]-(5-methylfuran-2-ylmethyl)carbamoyloxy]-1-(4-ethoxycarbonylbutyl)-1-azoniabicyclo[2.2.2]octane trifluoroacetate;
- (3R)-3-[(4-Fluoro-2-methylphenyl)-(3-methylthiophen-2-ylmethyl)carbamoyloxy]-1-(2-phenoxyethyl)-1-azoniabicyclo[2.2.2]octane trifluoroacetate;
- (3R)-3-[(3-Fluoro-4-methoxyphenyl)thiophen-3-ylmethylcarbamoyloxy]-1-(3-phenylallyl)-1-azoniabicyclo[2.2.2]octane trifluoroacetate;
- (3R)-1-Phenethyl-3-[thiophen-3-ylmethyl-(2,4,5-trifluorobenzyl)carbamoyloxy]-1-azoniabicyclo[2.2.2]octane trifluoroacetate;
- (3R)-3-[(4-Bromo-5-methylthiophen-2-ylmethyl)-(3-methylthiophen-2-ylmethyl)carbamoyloxy]-1-(3-phenylpropyl)-1-azoniabicyclo[2.2.2]octane trifluoroacetate;
- (3R)-3-[(4,5-Dimethylfuran-2-ylmethyl)-(5-methylfuran-2-ylmethyl)carbamoyloxy]-1-[3-(3-hydroxyphenoxy)propyl]-1-azoniabicyclo[2.2.2]octane trifluoroacetate;
- (3R)-1-[3-(4-Fluorophenoxy)propyl]-3-[furan-3-ylmethyl-(5-methyl-2-

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trifluoromethylfuran-3-ylmethyl)carbamoyloxy]-1-azoniabicyclo[2.2.2]octane trifluoroacetate;

- (3R)-3-[(2,5-Dimethylfuran-3-ylmethyl)-(2-fluoro-4-methoxybenzyl)carbamoyloxy]-1-(3-thiophen-2-ylpropyl)-1-azoniabicyclo[2.2.2]octane trifluoroacetate;

- (3R)-1-Allyl-3-[2-(4-fluorophenyl)ethyl]-(3-methylthiophen-2-ylmethyl)carbamoyloxy]-1-azoniabicyclo[2.2.2]octane trifluoroacetate;

- (3R)-3-[Butyl-(2,5-difluorophenyl)carbamoyloxy]-1-heptyl-1-azoniabicyclo[2.2.2]octane trifluoroacetate;

- (3R)-1-(3-cyanopropyl)-3-[(2,6-difluorophenyl)pent-4-enylcarbamoyloxy]-1-azoniabicyclo[2.2.2]octane trifluoroacetate;

- (3R)-3-[Cyclopentyl-(4,5-dimethylthiophen-2-ylmethyl)carbamoyloxy]-1-methyl-1-azoniabicyclo[2.2.2]octane trifluoroacetate;

- (3R)-3-[(3-Fluorophenyl)-(3,4,5-trifluorobenzyl)carbamoyloxy]-1-(3-phenylpropyl)-1-azoniabicyclo[2.2.2]octane bromide;

- (3R)-3-[(5-Ethylthiophen-2-ylmethyl)-(3-methylthiophen-2-ylmethyl)carbamoyloxy]-1-(3-phenylpropyl)-1-azoniabicyclo[2.2.2]octane bromide;

- (3R)-3-[[2-(3,4-dimethoxyphenyl)ethyl]-(5-methylfuran-2-ylmethyl)carbamoyloxy]-1-(4-ethoxycarbonylbutyl)-1-azoniabicyclo[2.2.2]octane formate;

- (3R)-3-[(4-Fluoro-2-methylphenyl)-(3-methylthiophen-2-ylmethyl)carbamoyloxy]-

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- 1-(2-phenoxyethyl)-1-azoniabicyclo[2.2.2]octane bromide;
- (3R)-3-[(3-Fluoro-4-methoxyphenyl)thiophen-3-ylmethylcarbamoyloxy]-1-(3-phenylallyl)-1-azoniabicyclo[2.2.2]octane bromide; and
- (3R)-1-Allyl-3-[2-(4-fluorophenyl)ethyl]-(3-methylthiophen-2-ylmethyl)carbamoyloxy]-1-azoniabicyclo[2.2.2]octane bromide.

64. (Previously Presented) A pharmaceutical composition comprising at least one compound of Claim 36, and at least one pharmaceutically acceptable carrier or diluent.

65-79. (Canceled).

80. (New) A pharmaceutical composition comprising at least one compound of Claim 37, and at least one pharmaceutically acceptable carrier or diluent."

Allowable Subject Matter

Claims 36-37, 39, 41-42, 44-64, and 80 are allowed.

The following is an examiner's statement of reasons for allowance:

Claims 36-64 were rejected under Obvious Double Patenting over the claims 1-19 of the Buil Albero et al. US 7208501 in the previous office action and the rejection is withdrawn in light of applicant's amendment faxed to the examiner on date 06/02/2008. The amendment includes "wherein when the cyclic group present in R1 is unsubstituted or has only one substituent, R2 has at least one substituent", which obviates the Obvious Double Patenting.

Any comments considered necessary by applicant must be submitted no late than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Niloofar Rahmani whose telephone number is 571-272-4329. The examiner can normally be reached on Monday through Friday from 8:30 am to 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Janet Andres, can be reached on 571-272-0867. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/NILOOFAR RAHMANI/

06/05/2008

/D. Margaret Seaman/

Primary Examiner, Art Unit 1625